Could We Finally Get the Healthcare System We Need?

Speakers:

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Moderator:

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(Transcription by [RA Fisher Ink](#))

Kirkpatrick: We're going to talk about healthcare now, which is something that in some years has been an even bigger theme. We did an entire healthcare Techonomy in New York two years ago and we've done our Techonomy Bio events. There's so much to say about healthcare, but the three people we have here are real thinkers, and in one case, somebody—investors, product people, and participants in the ecosystem at the vast scale. Okay, I'll introduce you to them all.

Hemant Taneja, right here, is a venture capitalist of the highest order. That's true, actually. He's with General Catalyst Partners, big investor in Snap, among other things, but now is pretty much focusing entirely on healthcare because you see that as a such big opportunity. Brian Kalis, who is managing director for digital health at Accenture, is somebody I think you'll find has an extremely big picture view of what's happening in a really constructive and helpful way. ck Andrade—is that how you say—

Andrade: Beautifully close. Andrade.

Kirkpatrick: It's because I'm doing too much. I didn't get to ask you that. She's the director of product management with the HealthSuite platform at Philips. That's a pretty significant thing. And I think I'm going to ask Brian to start because you have such a thorough overview of where we are. But I'm going to ask each of them to sort of give me their big picture appraisal of where we are in the American healthcare system and how much it really is susceptible to innovation to get us to something completely different since clearly we need something completely different. So Brian, what's your perspective on that?

Kalis: Well, we are in a unique time where we see really a convergence of multiple external forces all coming together to increase both the pace and scale of change within the healthcare industry today. If you look at two macro forces really that impact all industries, you have the concept of the digitization of everything, where everything physical now can have a digital footprint, as well as this concept of people having liquid expectations, where their experiences from every industry now are blurring industry lines and we're bringing that into healthcare.

Underlying those two macro forces, you have changes in the regulatory environment, which have changed both how we finance care, new ways of reimbursement, as well as increasingly funding forms of digital health. On the demographic side, we have an increasing aging population and ultimately a chronic disease explosion, which are really driven by a set of lifestyle diseases which can be presented.

And then lastly, the cost of care just continues to go up. And all of these things come in together at one time are really driving in this concept of new entrants entering the market, whether it's startup companies, nontraditional entrants entering into healthcare, and then incumbents really thinking about how do we do things differently.

Kirkpatrick: Like Aetna merging with CVS, for example.

Kalis: That's one example.

Kirkpatrick: Okay, good. I'm going to let you go last because I want you to get really detailed about what you're doing. I want Hemant to give me the VC view of why are you focusing entirely on healthcare and what do you see the opportunity to be?

Taneja: I think everybody here knows that the healthcare system is practically on the verge of bankruptcy. So we don't need to go into the issues. The challenge for entrepreneurs—because I look at my entire world through the lens of what is it that will make entrepreneurs be successful in this space—is pretty tremendous.

We probably see a few hundred companies every year that are working on health IT and they generally break into two archetypes. It's either some physician or somebody affiliated with a health system that was solving their problem. They hired a software engineer, made a little widget and they think it's going to change the healthcare system. Or it ends up being two kids out of Google that think they know machine learning and they can write great software and they're going to change the healthcare system.

And none of that actually ends up yielding great companies in this space. If you think about the fact that this is 20 percent of the economy and the biggest software company in this space is $25 billion dollars market cap, Cerner, I think is somewhere around there. That tells you this actually hasn't been an industry that has actually adopted technology in a way that has proliferated.

So a lot of what we've been looking at is what is it going to take for great companies to be built here that are consumer, or patient first in this case, or physician first in this case, as opposed to being mired in a lot of the regulatory issues, not to undermine them but how to obfuscate them from building great consumer experiences in this industry. And now I do think the world is changing, a) because the problem is even more acute. All the tech companies here in the Valley are starting to take a shot at it. There are some standards that the industry is converging on. I think it's a matter of time before this space does open up to build a new set of applications for it.

Kirkpatrick: Just quickly, what are the two big things you're working on?

Taneja: I've been building two companies over the last five years. One is a company called Livongo Health, which we started in our offices with a great partner, Glen Tullman. There the idea was how do we build a platform for chronic care management for consumers. And we very much built it first focusing on the 30 million diabetics in this country and thinking through what would be a delightful consumer experience for them and then figure out how to align the economics of the landscape in a way that can scale. And that's one of the fastest-growing companies in our portfolio.

And then the problem that we're working on now is building another company that's very much focused on this whole how does software become a true leverage point, how do you actually create the digital transformation of this space, which is very complex compared to other industries. Here, you've got to migrate to value-based care. You've got to migrate to preemptive care. You've got to take advantage of data and machine learning here in ways that we really don't. We've got physician productivity issues. These are all problems that can be fixed with software if we were using software the right way in this industry and that just isn't happening. And we are taking a shot at figuring out how to do that.

Kirkpatrick: So it's kind of an innovation platform. And I want to get back to that in a minute because there's another aspect of it that you mentioned on the phone that I want you to talk about. ck, what is HealthSuite? You basically are a data-sharing expert within a platform that's been created to basically be a transformative tool in the industry. What is it?

Andrade: Sure. To understand HealthSuite, you need to understand a bit about where Philips is today. When people tend to think about Philips, they think toothbrushes and lightbulbs, but we are in fact a really solid health technology company. So we build our enabling technologies, our devices, as well as our platforms. So our cloud platform, the HealthSuite digital platform, - we've got our on prem platform. We have an artificial intelligence platform. Because what we're trying to do is find ways to harness technology to make care more personal, predictive, precise, and then proactive.

So what is HealthSuite? What we've done is within all of the regulatory, privacy, and security compliance requirements, we have built a cloud platform that provides the medical IoT as one component, one set of services.

Kirkpatrick: You mean like this?

Andrade: Yes. We can connect your devices. Being able to then have the interoperability components, whether it's our fire API or being able to look at our integration engines that we have. We have identity and access management that is healthcare built, purpose for healthcare, but also for the cloud. And then, a wide range of different data repositories to optimize how you use different types of data, but pushing current industry standards. So it was very interesting to

hear about how much are we harnessing what we're doing with software and innovation within healthcare. I think even about the big data platform that is a core piece of HealthSuite.

So what we're able to do is to use our enabling technologies to build digital solutions across the healthcare continuum, from ICU all the way through to aging in place. So when you look at some of the ways in which we've been using that at Philips, for example, adaptive intelligence for pathology, cardiology, radiology, to be able to drive clinical decision making in diagnoses, precision medicine. So we've got a wide range of ways in which we're taking traditional healthcare approaches and data and practices and actually bringing them to the next level. But from my point of view, I think that the most disruptive thing that we can do is share data and create technologies that will actually allow individuals to control their healthcare.

Kirkpatrick: What it is, it's [a] multifaceted, cloud-based healthcare platform. And I remember when you showed it to me the other day, my first question—I think the first thing I said was, geez, Amazon would want this. And then you said, "We just did a partnership with them."

Andrade: Yes.

Kirkpatrick: So they obviously do want it. They're using it in some way. Because they don't have that kind of thing.

Andrade: What we've done actually with Amazon is that, with the AWS backbone, we've added the healthcare layer.

Kirkpatrick: Right.

Andrade: So that was the beautiful thing when we went to HIMSS together, and actually, we'll be together at re:Invent in two weeks, where what we've done is provided that healthcare optimized layer where you'll take a basic service, cloud infrastructure, and we will tweak the API so that it meets the security requirements. We put a layer around it so that you can use it for healthcare and protect an individual's data.

Kirkpatrick: It's a very powerful thing. And I've said like six times, one of the themes of this conference is collaboration, writ large and writ small. I don't know if you heard Andrew Nash this morning of Capital One. Were you here for that?

Andrade: I wasn't.

Kirkpatrick: Because he was talking about identity and the problems of getting things—collaboration and sharing access to data is one of the ultimate central challenges we face in technology. But when you say that sharing data is the sort of secret key, between whom and how—and I know you've basically built a tool that would allow it, so talk about that a little more in detail.

Andrade: It was very interesting to me yesterday when Sir Tim was talking about Solid and a question came up around 'Can I put my healthcare data in there and who owns the data?' And

that actually is part of that whole issue of how do we share data in healthcare because an individual really needs to be able to control their data. We need to philosophically, as well as on a practical and administrative and technical level, allow electronic health records to exchange data.

One of the things that we think about is the fact that, what is the common element of every interaction between a provider and a patient? The patient. That individual goes from episode to episode and if they're taking their data with them and we allow them to share the data with them. We allow them to take it to places and share it to another institution. That actually simplifies some of the interoperability issues that we're facing.

Kirkpatrick: Well, in fact, it's one of the big problems patients have because one doctor doesn't know what the other one did, and they sometimes get the same procedure multiple times or in different ways. They get drugs on top of drugs that they might interact with because—it's crazy, frankly, as a patient in the American healthcare system, how uncoordinated it is. You're nodding, Brian.

Kalis: I was just going to say, as you're pointing out all the discussion points, this really isn't a technology problem. Really this is a cultural problem in terms of the ability to share, a lack of incentives, of people—of a health plan and a provider, a provider and a patient willing to share that information, and then just being able to get those out of the way. We have the technical infrastructure, and now as you're mentioning, Hemant, we have the standards. Now it's how do we actually align all those other incentives to begin that sharing?

Kirkpatrick: I mean, even some of the tectonic shifts that are happening, like the Aetna-CVS merger, are based in part on their desire to share data just between those two organizations, and thinking that just that alone, just what Aetna and CVS have, could allow them to be way more efficient in treating the people that they're going to have coming in to their ambulatory clinics and all the CVSs are all going to turn into, right?

Kalis: I think from the prior waves of trying to allow data sharing just through other forms of incentives or interoperability, had challenges to get actual uptake and buy-in across the industry. So what are you seeing now? You're seeing a lot of vertical integration. Well, I can agree and align incentives. Well, I'll get into care delivery, I'll get into financing, and all these things, and that will at least align incentives to begin data sharing. The question is, where will this go?

Kirkpatrick: Aligning incentives of course for value-based care is a key other trend. When you see all these startups and look at which ones might or might not work, does this issue of data sharing arise continuously with you too?

Taneja: Yes. I have a slightly contrary view on all the data in healthcare. I think most of it's crap.

Kirkpatrick: Most of the data is crap?

Taneja: Yes. And I say that because if you think about a lot of the software that's been built for the health system, it's all been built in the context of billing and compliance. And there's this joke in the industry—I'm not from the industry, but when CPD codes change diseases disappear from hospitals because you stop billing against diseases. It's all about maximizing billing because you're in this volume-based model. So this whole obsession with the data that sits in these systems and how it's going to transform everything, while some of it has merit, I don't buy it.

And I think the first problem that needs to be solved is rethinking software for how physicians and patients need to interact. Those tools are crap. You walk in to go see a physician; they're always late and they don't even look at you when they're supposed to be seeing you because they're busy entering stuff so they can bill the most for that visit that they're doing at that time. There's no empathy in the system and it's all about revenue as opposed to how to deliver the best care. And that is not their fault. That is just the way this industry has developed.

Kirkpatrick: In other words, to get paid, they have to enter the data into the screen in a certain way and it's hard to do and it's got a lot of fields and they're always working on it.

Taneja: Yes. We have a supply chain system and we're CRM on top of that, to use a broader tech analogy, and that just fundamentally has to change. And I think now that there's standards, you can actually see an ecosystem of applications develop that are much more suited to how physicians and care teams actually coalesce around patients and provide them with care and how patients can go take their data from one place to the other and this data is actually maintained around their health and the data is much more real-time and representative of the care as opposed to representative of the billing. So these fundamental issues have to be solved before this whole idea of this sort of data-connected system is really going to work.

Kirkpatrick: ck, I want you to address that—

Andrade: I was nodding because that actually was one of the points in my little cue card in prepping.

Taneja: I saw it. That's what I was saying it.

Andrade: Thanks for stealing my cue card.

[LAUGHTER]

So I straddle multiple worlds. I'm a clinician. I still treat patients in addition to my tech life. I'm a clinician; I'm an academic, and the thing that pains me the most is trying to chart, maintain an interaction, bond with my patients, understand their experience, but also get clinical data. So taking notes preceded billing. Taking notes was about writing things down so you could provide the right care. And we have not had—because it's not really sexy to build software, any kind of tool, because I don't know if it's just software, to be able to capture clinician-patient

interactions in a way that is intuitive, fits with the therapeutic relationship. Right? So I think we're really in agreement there.

Taneja: This is the issue in this industry. We've spent billions of dollars digitizing the system and every health system CEO that you can talk to, they say they deploy their EHR and then the physicians become less productive. Then they hire scribes to walk behind physicians to take notes. Which other industry do we deploy software where we become less productive and create jobs except healthcare?

[LAUGHTER]

Andrade: It's so true. It's kind of interesting because—but it's true. So I sit there and for me, it's this dichotomy. So in my day job, I'm building really amazing software and then I go to my clinical work and I am—it's like having an abacus or, you know, a little slate with a little rock to scrape into it. But I think one of the things is how can we start flipping that conversation and looking at what are all these things that we can do to actually start augmenting that patient-clinician, the interaction, to be able to capture the data.

Kirkpatrick: But ck, Hemant clearly thinks the way to break that logjam is with a really cool new kind of software, which he's not going to tell us too much about, but I'm going to try to get him to a little more in a minute. But is that the way or do you see another way to break the logjam?

Andrade: I think that it's a number of things. Because when we capture the data from that patient-clinician interaction, it may not be in a format in which we can analyze it and use it for care. So that's another piece. So that's where we get into some of the natural language processing, innovations that we need.

Then the other piece is, so we get it in, but we still have to figure out how to share it. We still have to figure out how to move it along. So I don't think we can do one thing. I think we have to do them all simultaneously.

Kirkpatrick: But the thing you said to me on the phone that was so interesting was it isn't just figuring out how to share it, because it sounds like you've kind of got a good idea on how to do that.

Andrade: We've got the technology.

Kirkpatrick: It's who pays for it once it gets shared. Because the institutions that control it now don't want to pay for the sharing because it might lead to the patient going to their competitor, right? Brian, you're nodding. Your thoughts?

Kalis: Well, I was going to go to just the concept of we need to improve the labor productivity problem, and you alluded to this, and so forth. And to do that, technology is a piece but it's not the only piece. So to do that you need to think of new models both of care as well as new models of financing. That includes shifting labor to the right level of care and mixing the care

team up, and you're seeing signals of different groups doing that. How do you actually allow a medical assistant to do things that—you know, and a nurse practitioner to do other things that could be—and a lot of that can then be enabled by technology, but it needs to be technology that ultimately is designed for humans.

How do you actually make sure that this is designed by a practitioner for a practitioner? Those signals exist. So you're seeing companies like Iora Health and some of these new forms of ambulatory care, which built a system from the ground up, where they shifted labor and also made a system that worked for keeping a population healthy versus billing. You see that as well in financing. In financing, you're seeing the same thing start to emerge. We're still trying to figure out where will this go. Will it be a path to success? So Oscar Health built its claim system from the ground up because of that. Devoted Health is doing the same thing. It's still to be determined, will that be a path to success.

Kirkpatrick: But people who use Oscar are generally at least a little bit happier than people who have other sorts of health insurance, my daughter being one of them.

Hemant, you alluded briefly before to something you told me about, that what this thing is that you're not really going to tell us too much about, has a lot to do with physician empathy-centric approach with software. How can software help? Would it be AI takes some of the burden off the sort of routine processing stuff that they have to do so they have more time to actually look the patient in the eye like I'm looking at you? Talk about how it could work.

Taneja: I think you were practicing so you can relate to this. If you just think about how they interact with software while seeing the patients, it's just not designed well. And so a lot of these health systems, they carry a 100, 200, 300-person software teams that are then trying to work around their EHR's bad workflows with custom applications for their different clinical practices. And this whole cycle just has this terrible effect that it makes it increasingly less and less productive and our view is how do you get away from having to work off of these supply chain systems.

And this is not just the view of the project that we're working on. I think the entire tech industry is coalescing around this. You know this. Fire as a standard is developing and how do you build applications that can plug in to these EHRs—I don't mean to undermine the integration challenges there; you know this better than I do—and build a whole new set of applications that are designed around physician first and patient first interactions.

The challenge today is, like this note taking issue that you were referring to, there's literally 15 companies in the Valley that are trying to solve that problem. And I think they will all fail because they have no fundamental go-to market because they have to then ultimately figure out how to connect into the EHRs and go sell into these systems, and this just doesn't exist. You don't have a developer ecosystem here that you can bring these applications to market with. So there's core learnings from other industries where software has been used in that way,

ecosystems have been created, that needs to exist here, and I do think sort of in the next decade that'll come about here.

Kirkpatrick: This is a big bet that you're making on this.

Taneja: Absolutely.

Kirkpatrick: I want to overlay one more concept. There's a lot of talk about Medicare for all right now. And I think the reason it's a potent political issue is because Americans think the American healthcare system stinks and they're willing to try something new. Because costs just keep going up, they know that they're not getting the efficiency and the care for themselves, and they're seeing their aging parents get medications that are crazily overprescribed or all kinds of crazy things. But it is interesting that if the problem—going back to this data sharing—is who would pay for it? And I'm not saying what you're saying doesn't make a lot of sense but I think this data sharing is also a critical issue. Couldn't government pay for it?

Andrade: So you know, it's the whole thing about the business model. And so one of the things that we've been grappling with is the fact that it is technically easy, not trivial, but doable, to be able to build technologies to allow sharing between different health systems, between health systems and patients and vice versa.

I worked on a prototype for a global PHR and they came down to who's going to pay for that. And the individual doesn't feel that they should be the one coughing up big bucks for personal health record because their doctor is going to be using it to provide care, or any other health or wellness provider.

The individual health system goes, "Well, should I fund this, because they're going to be using the data with somebody else?" And then it comes to the government, well, what are the borders of a government funding it? So we do need to figure out that business model. So even when you crack the charting software, then we still have to figure out how do we get to pay for something. Solid was really interesting to me yesterday because it started thinking about that concept of, oh, it's a global personal record.

Kirkpatrick: Well, it is completely under the control of the individual if they can make that work.

Andrade: And then we can put our health data into it, but how are you going to get the health data from everywhere to put into your Solid, and then how's that all going to be financed? So I think we need disruptive business models and I think that's the piece where, when we think of these issues in healthcare, it's about more than a technology issue. It is a process issue. It's a business model issue. It's holistic.

Kirkpatrick: Brian, you're the professional, big picture view guy, right? And you told me you were an optimist, that the healthcare system can get better. What is the lever that's going to most lead to that?

Kalis: Well, it ties to exactly what ck was mentioning. It comes down to the incentive alignment, in particular, how you pay for things. And no matter who the payer is, if you're paying on volume, you'll just get different skewed incentives. So I think aligning where you're actually paying based on outcomes and value is where you start to see the shift. And the optimistic side is we are seeing those signals of some forms of financing coming together with prevention that actually align incentives that you allow you to pay for things like food, housing, transportation, all these other things that are not traditional care, which is starting to see outcomes.

Kirkpatrick: And at least some of the way that will happen, given the U.S. system is so much employer paid, is the employers will demand value-based care because they're wasting their money otherwise, right?

Kalis: Yes. And we're starting to see some of those come together, primarily in the primary care onsite clinic space with financing.

Kirkpatrick: Well, there's so much to discuss. Thank you all three for being here. We scratched the surface in an interesting way. I can't wait to see when you launch this company, Hemant.

Andrade: And I will use your software.

Kirkpatrick: She will use it. And meanwhile, a lot of other good things we hope will keep happening. Thank you, Brian. Thank you, ck.

Andrade: Thank you.